Transforming Logistics

Technical Information Division Symposium *Achieving Knowledge-Enabled Logistics*

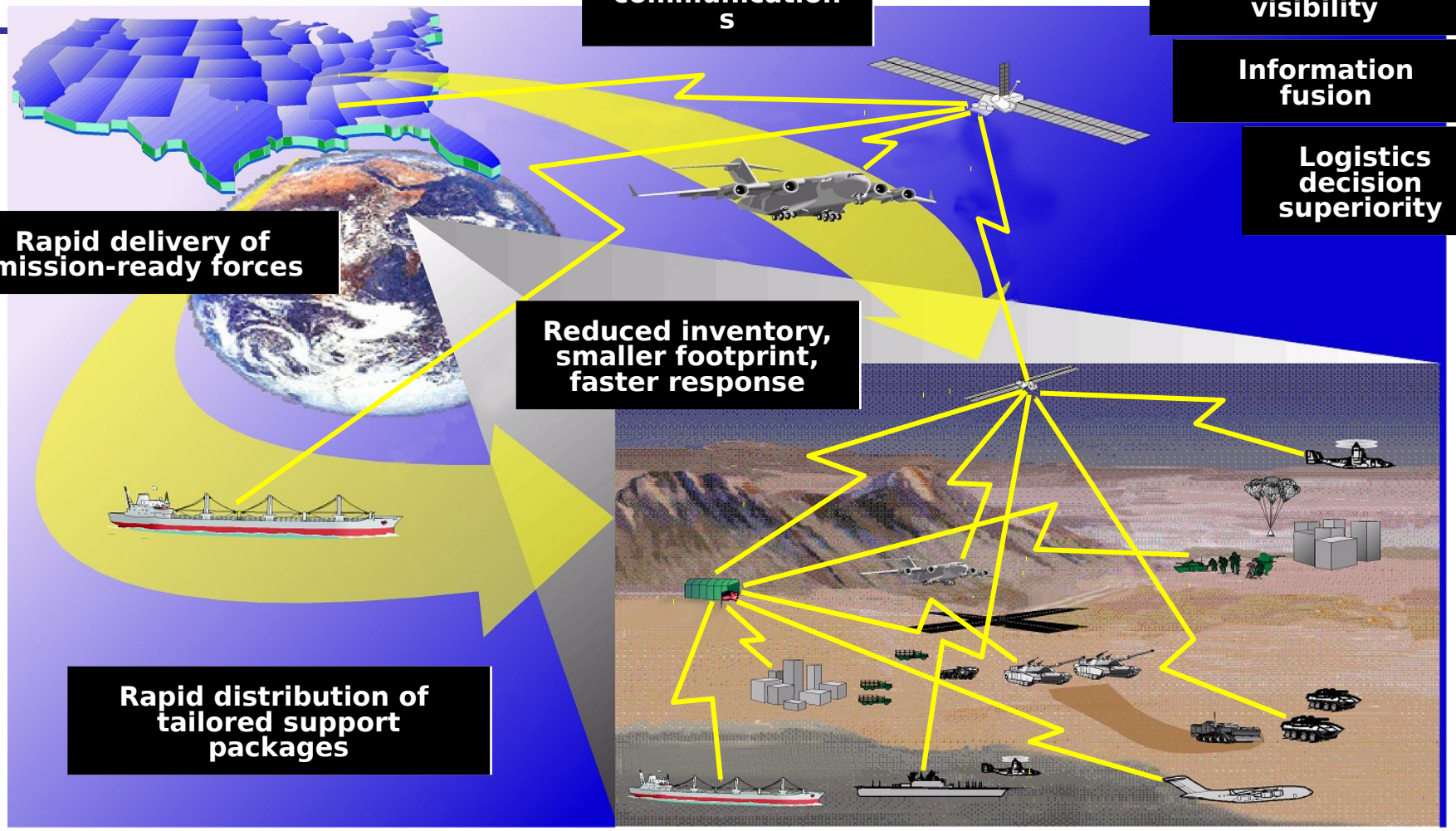
Jerry Beck OADUSD(LPP)

3 Mar

Near-Term Transformation Priorities (Joint Logistics Board)

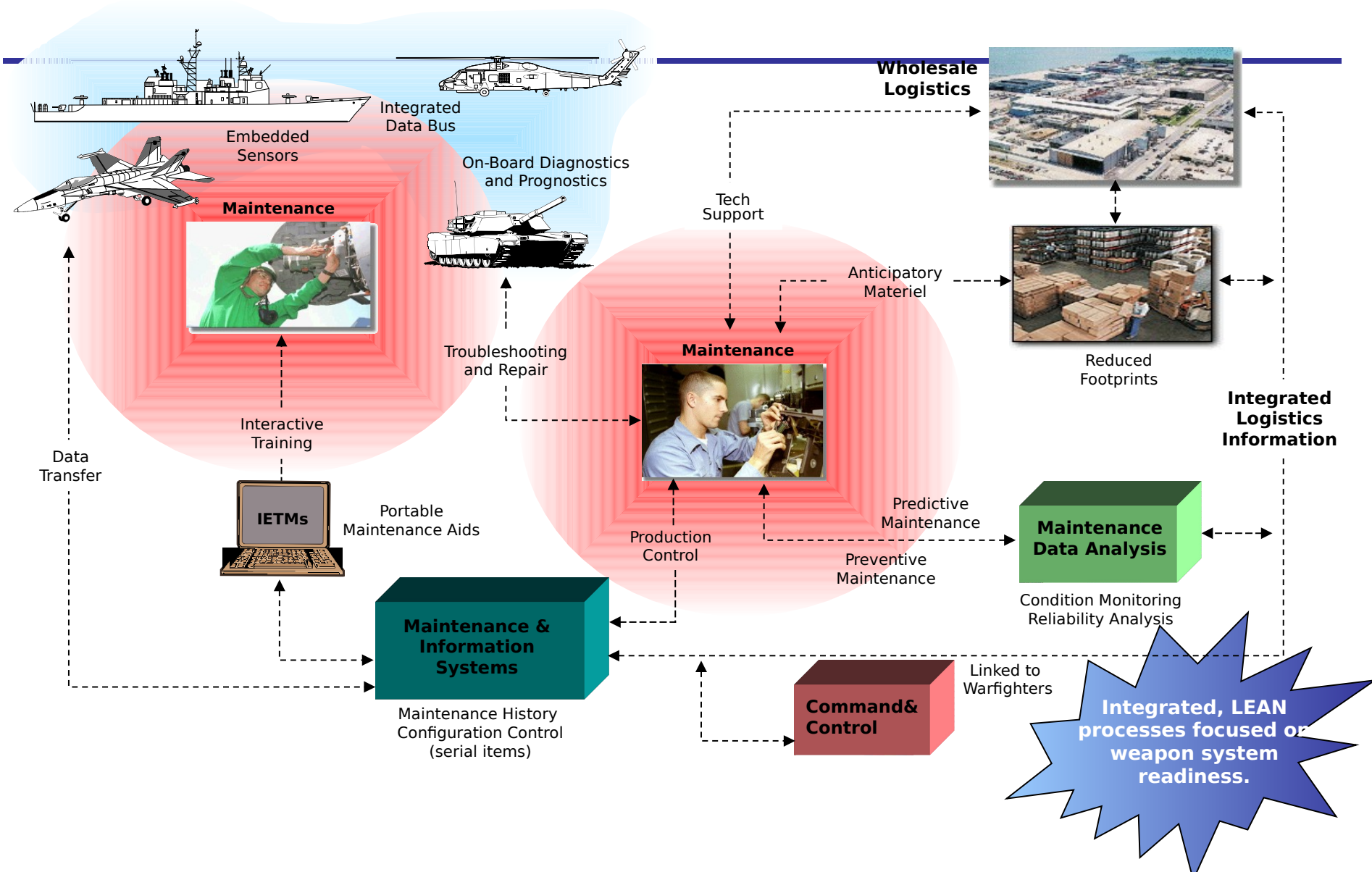
- **Implement meaningful and actionable metrics**
- ***Accelerate Performance-Based Logistics***
- ***Develop a way ahead for Maintenance Excellence***
- **Facilitate Distribution Process Owner success**
- **Streamline material flows**
- **Assess Customer Pay Opportunities**
- **Coordinate Logistics Enterprise Integration**
- ***Rationalize a corporate DoD Logistics vision into a coherent Transformation Roadmap - Focused Logistics***

Focused Logistics

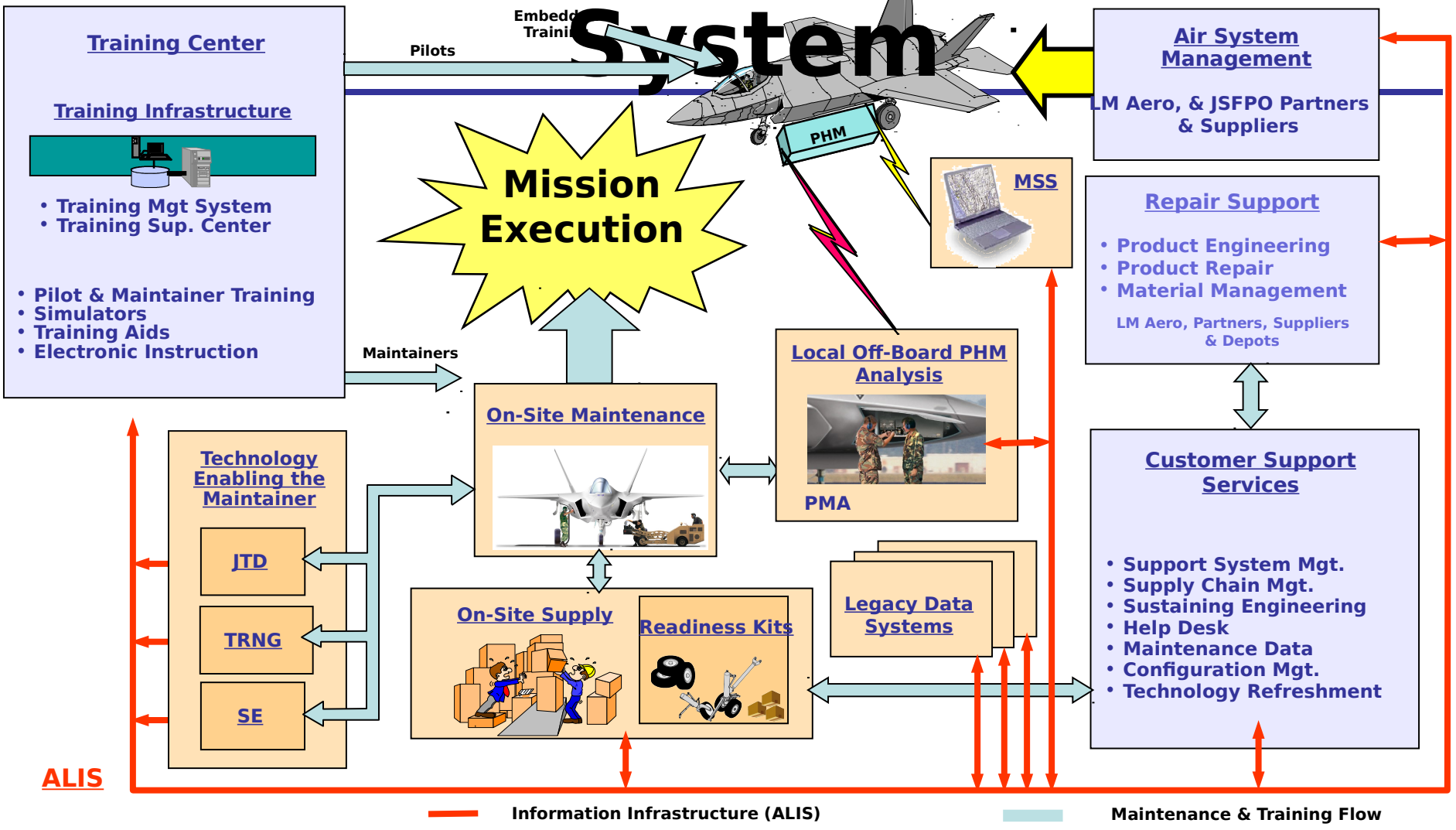


Bottom line: Forces in theater — whether forward-stationed or deployed — deliver more capability, require less support

Achieving Maintenance Excellence



Autonomic Logistics System



Autonomic Logistics System Provides an Affordable Rapid Response Capability to the Warfighter

Army Stryker Vehicle

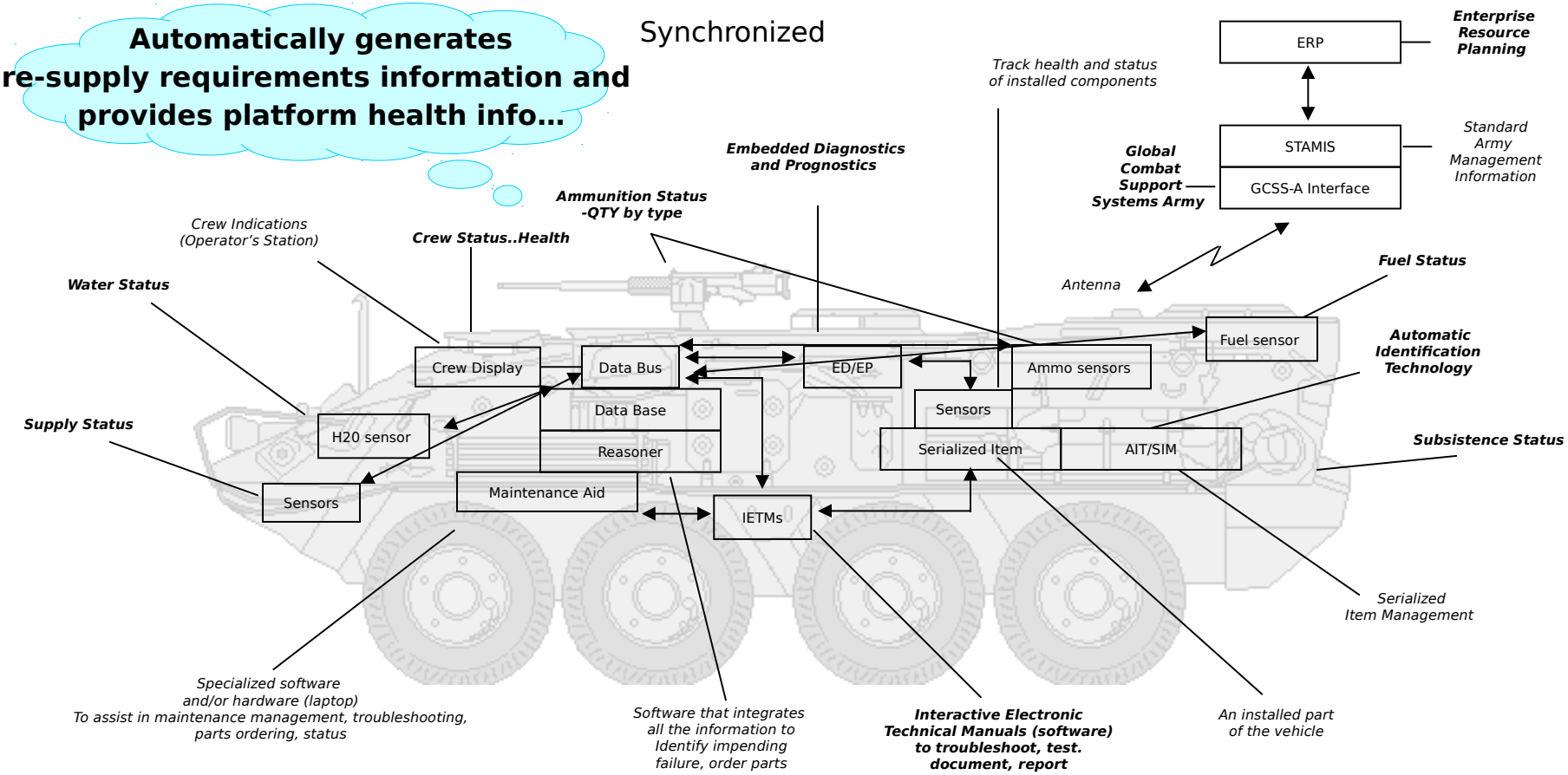
Integrated Weapon System Status and Health Management

Sensor-Based Self Monitoring Self Reporting

Automatically feeds Army Shared Data Environment

Synchronized

Automatically generates re-supply requirements information and provides platform health info…



Blackhawk HUMS

Description:

- On-board diagnostics and prognostics.
- Crash survivable cockpit voice and data recorder.
- Obtains real time vibration, rotor smoothing and aircraft health usage info.

Background:

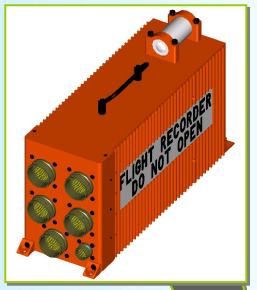
- Successful HUMS demonstration on-going.
- Proposed cost funds UH-60M integration.

Benefits:

- Obtains real time vibration, rotor smoothing and aircraft health usage info.
- Supports predictive methods to allow replacement of parts prior to catastrophic failure.
- Reduces O&S costs.
- Improves readiness.

Health and Usage Monitoring System (HUMS)

Fleet Management Recorder (FMR)



Incident Investigation Direct Download through Ethernet

PBL is Performance -Based

PBL Guidance: A strategy for weapon system product support that employs the purchase of support as an integrated, affordable, performance package designed to optimize system readiness. It establishes performance goals for a weapon system through a support structure based on long-term performance agreements with clear lines of authority and responsibility to continuously meet the users needs.

- **Requirements Determination**
- **Engineering and Technical Services**
- **Configuration Management/Control**
- **Technical Data Management**
- **Retrograde Management**
- **FMS Support (If Applicable)**
- **Public/Private Partnerships or Teaming**

PBL Weapon System Support

Real-Time System Status

Industry/Government

Partnerships

Buys Performance As a Package
(Including Surge/Flexibility)

Weapon System Management

Force Provider

PBA

PBA

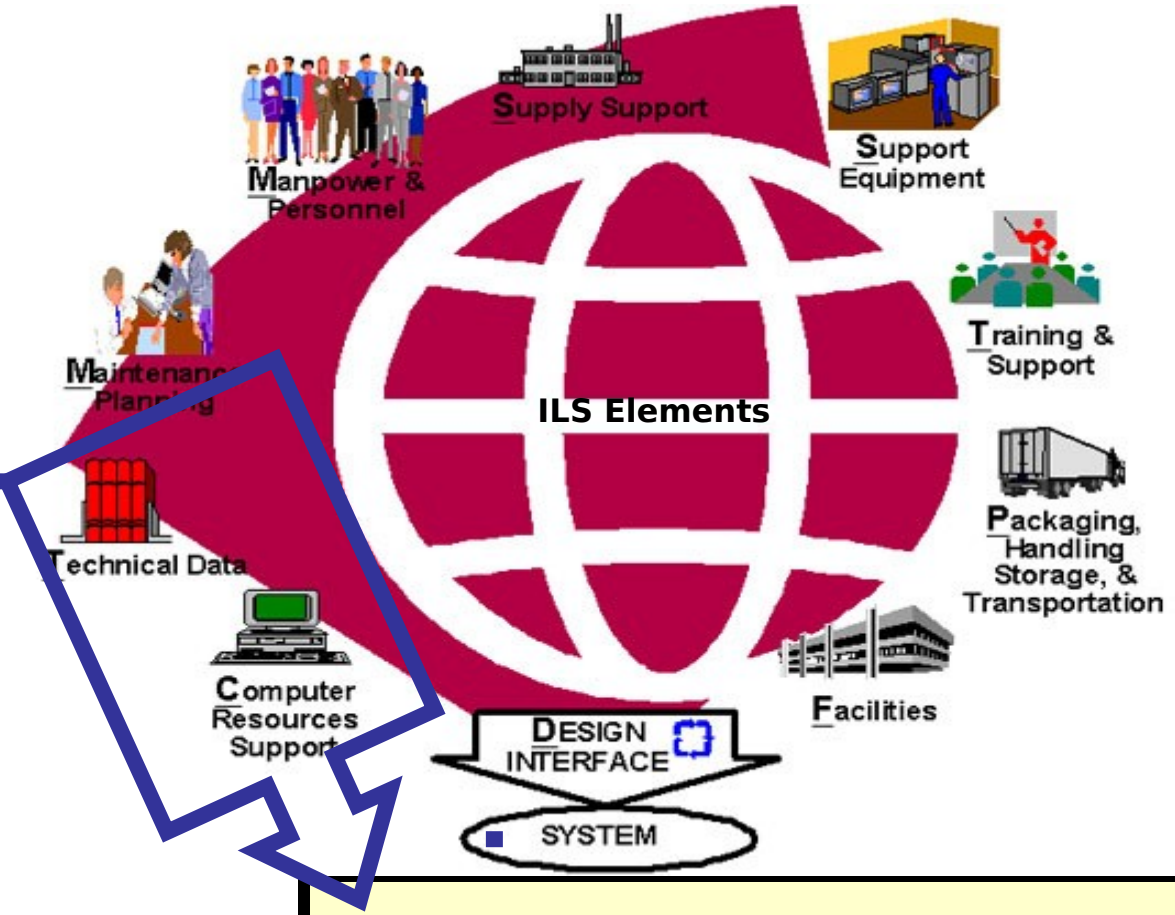
Ensure system is sustained at optimum level per PBA

Provide continuou reliable, affordabl support per PBA

Acquisition *Sustainment* *Disposal*

Visibility into cost/risk decisions across life cycle

PBL Applications



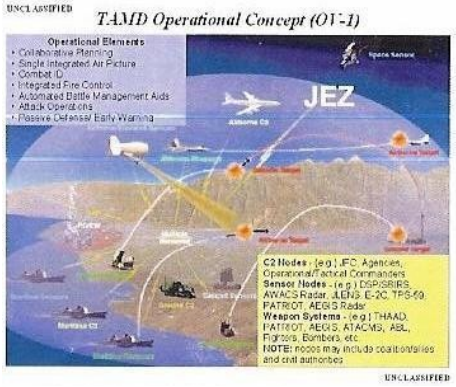
System Level

Sub-system Level

Component Level

Technical Data Solutions to meet Network Centric Capability

Where Tech Data Must Fit with War Fighter Vision


UNCLASSIFIED
TAMD Operational Concept (OV-1)
Operational Elements
• Collaborative Planning
• Single Integrated Air Picture
• Combat ID
• Integrated Fire Control
• Automated Battle Management Aids
• Attack Operations
• Passive Defense/ Early Warning
JEZ
C2 Nodes - (e.g.) JFC, Agencies, Operational/Tactical Commanders
Sensor Nodes - (e.g.) DSP/SBIRS, AWACS Radar, JLENS, E-2C, TPS-59, PATRIOT, AEGIS Radar
Weapon Systems - (e.g.) THAAD, PATRIOT, AEGIS, ATACMS, ABL, Fighters, Bombers, etc
NOTE: nodes may include coalition/allies and civil authorities
UNCLASSIFIED

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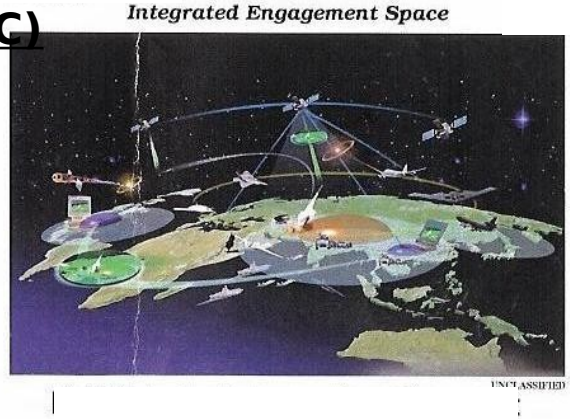
work Centric Global Command & Control Syste

Global Joint Integrating Concept (JIC)

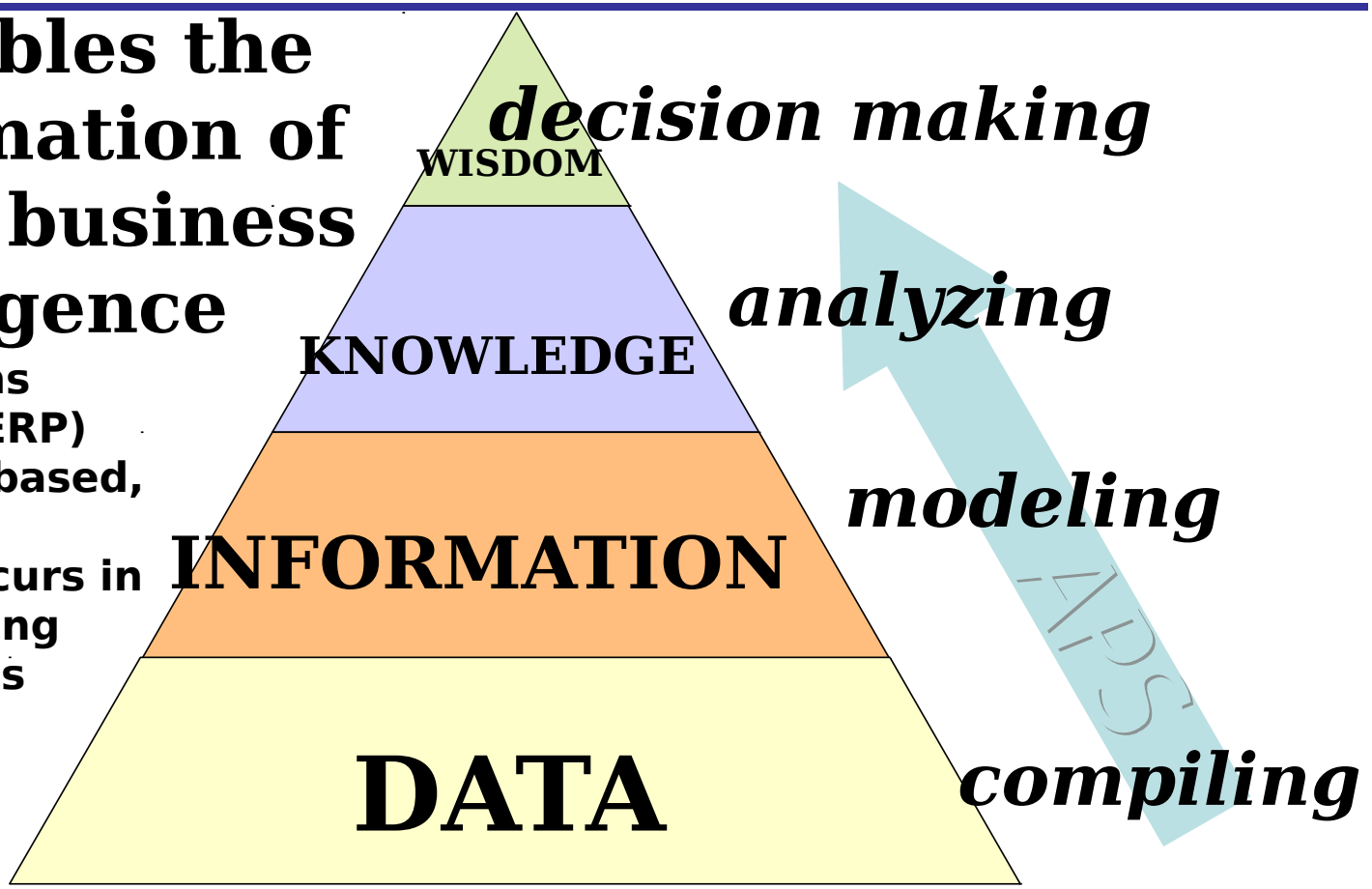
- **GCCS Definition**
- **Integrated Engagement Space**
- **Critical operational capabilities identified**



How does Advanced Planning and Scheduling Fit in the Information Pyramid?

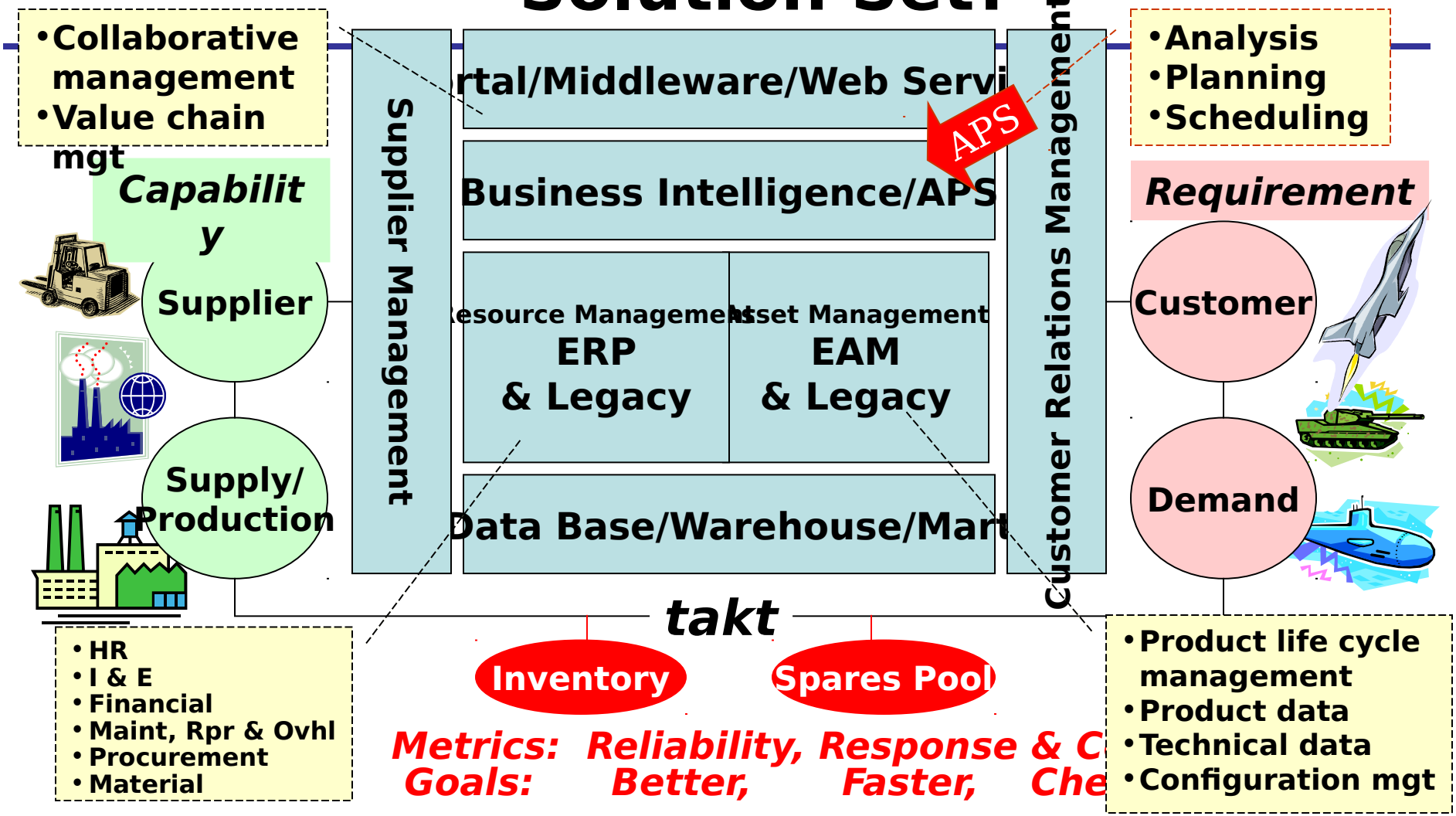
APS enables the transformation of data into business intelligence

Business systems (legacy, MRPII, ERP) are transaction based, and much of the analysis that occurs in advanced planning and scheduling is above the transaction level of detail.



How do I transform data to decision support quality?

How does Advanced Planning and Scheduling Fit in the Solution Set?



Where does APS fit into my solution set framework?

APS Provides Business Intelligence to the Value Chain

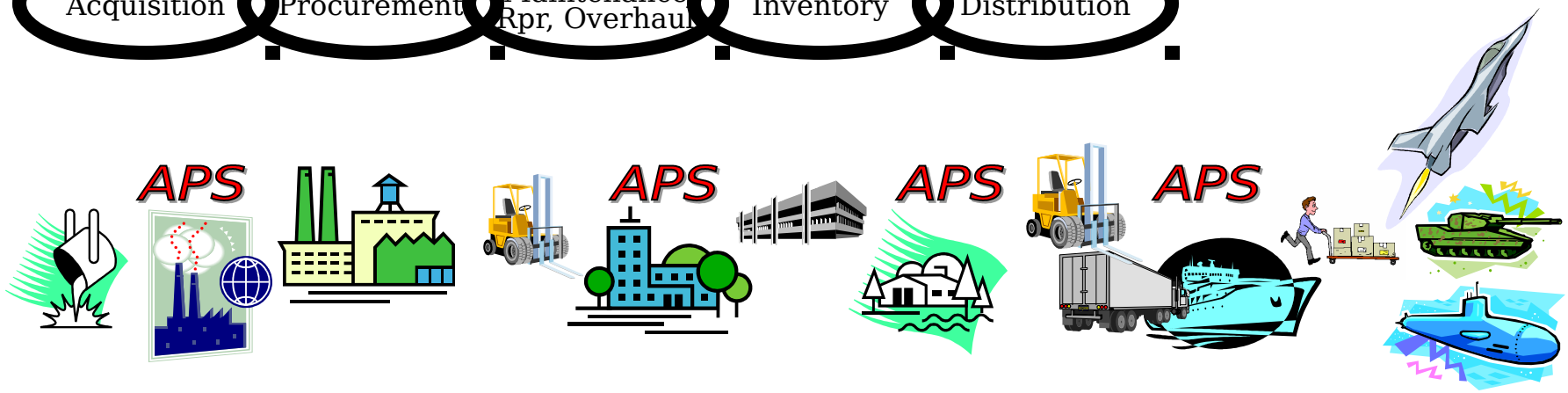
Reliability Value Chain

Design Engineering → In-Service Engineering → ECPs → Modifications → Service Life Extemsion

Response Value Chain

Acquisition → Procurement → Maintenance Rpr, Overhaul → Inventory → Distribution

Material Availability → **Operational Readiness**



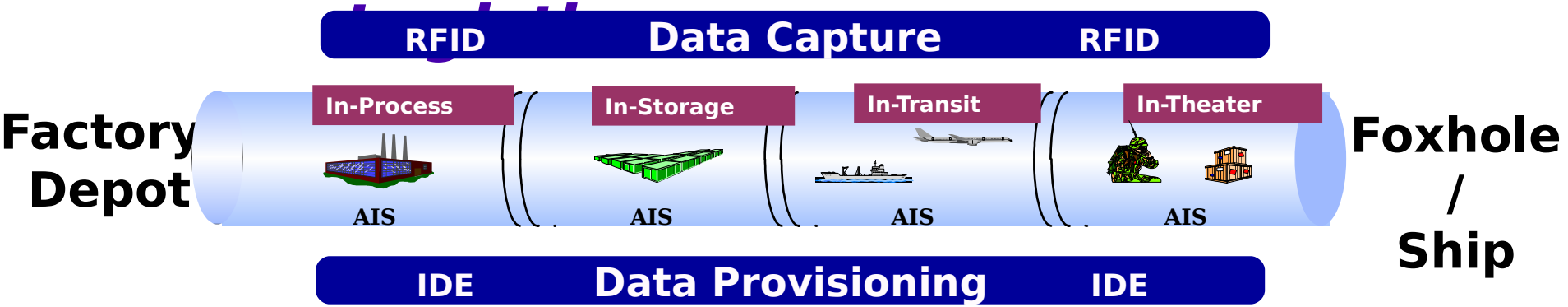
How does APS relate to the Material Readiness Value Chain?

The Impact of IDE

As JTAV is replaced by IDE AV, users, customers, and process owners will be provided timely and accurate information on the location, movement, status, and identity of units, personnel, equipment and supplies

This facilitates the capability to act upon that information to improve overall performance of DoD's logistics practices

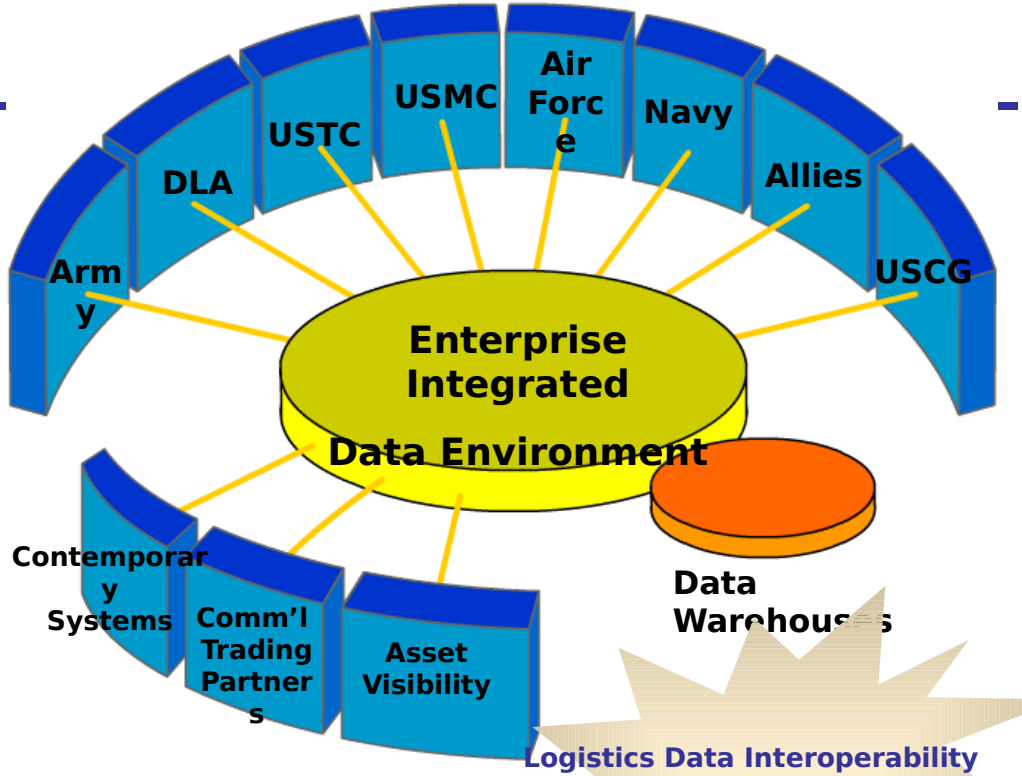
"Sense and Respond"



How Else Does IDE Contribute to Asset Visibility and Overall Interoperability?

Vision

The DOD Logistics Enterprise is executing practices, processes, applications, and decision support in an integrated logistics data environment, thereby achieving logistics data interoperability within a Net-Centric Community of Interest (COI)



Logistics Data Interoperability Identified in FLOW99. Re-Validated in FLOW01 and FLOW03

TODAY
- Stovepipe Systems
- High Cost
- Limited Data Interoperability

EIDE

TOMORROW
- Eliminate stovepipes
- Lower costs (reduced interfaces)
- Enable system-wide interoperability

Tasking from PPP Tiger Team

- **Establish a Technical Data Subgroup to define a road ahead - Work with AIA - Begin Jan 05, report out 60 days thereafter - Opportunity Areas Identified**
  - **Technical Publications**
  - **Product Data Management**
  - **Professional Development**
  - **Technology Development**

Tech Data Areas of Opportunity

I. **Technical Publications:** Expedite transition from paper to interactive electronic format

II. **Product Data Management (PDM):** Foster early integration of acquisition and sustainment data management systems into a “life cycle” system to improve reliability and decrease logistics footprint

Tech Data Areas of Opportunity

III. Professional Development:
Ensure both developers and users of tech data understand their roles in contributing to sustained material readiness of systems

IV. Technology Development:
Enable the inclusion of new technology initiatives into the tech data system

Implementation of S1000D

- New and Modified Weapon Systems
- Legacy Data
- Understanding End-User Needs
- Service Boundary Conditions
- Achieve Network Centric Logistics
- Sustainment of Data Systems
- Digital Technical Data Capability

Tasking for Maturing S1000D

Service / Industry / International Teams

- Complete Business Rules
- Identify Needs
- Identify Pilot to move toward Network Center Operations

TASKING

- **Missions**
  - RWCAS
  - Convoy Escort
  - Utility Support
  - Armed Recce
  - CASEVAC
  - Airfield QRF

- **24 / 7 Sustained operations**

- **Average % Day/Night**
  - AH: 58.6 / 41.4
  - UH: 60.6 / 39.4

- **FMC / MC (%)**
  - AH: 61.0 / 70.7
  - UH: 55.0 / 60.0

“These old aircraft are surviving and succeeding on the backs of our maintenance Marines and at the risk of our aircrews lives.”

Defense Acquisition Policy Working Group

The DoD Acquisition Guidebook
12 June 2003

DoD Acquisition Guidebook

Objective

- **Revise and Complete Electronic DoD Acquisition Guidebook by September 2004**
- **Electronically Link the Guidebook to Policy Documents (DAU)**

Criteria

- **This will be a Guide NOT A POLICY Document !!**
- **Explain, will not require**
  - **What and how vice shall and will**
- **Except when…(driven by 5000 policy)**
- **Relationship to other Guides and other Chapters**

Overview of the Defense Acquisition Guidebook *(11 Chapters)*

- **Chapter 1, *Department of Defense Decision Support Systems*, an overview of the Defense Department's decision support systems.**
- **Chapter 2, *Defense Acquisition Program Goals and Strategy*, acquisition program goals and the topics the program manager should consider in developing a strategy for the acquisition program.**
- **Chapter 3, *Affordability and Life-Cycle Resource Estimates*, acquisition program affordability and resource estimation.**
- **Chapter 4, *Systems Engineering and Integrated System Design*, system design, and the systems engineering processes that aid the program manager in designing an integrated system to balance capability,**
- **Chapter 5, *Life-Cycle Logistics*, provides the program manager with a description of Life-Cycle Logistics and its application throughout the system life cycle, from concept to disposal.**

Chapters 4 & 5 are strongly linked

Overview of the Defense Acquisition Guidebook *(Chapters 6-11)*

- **Chapter 6, *Human Systems Integration*, addresses the human systems elements of the systems engineering process.**
- **Chapter 7, *Networks and Information Integration*, network-centric strategy to transform DoD warfighting, and intelligence capabilities.**
- **Chapter 8, *Intelligence, Counterintelligence, and Security Support*, responsibilities regarding the prevention of inadvertent technology transfer, and guidance for the protection of those technologies.**
- **Chapter 9, *Integrated Test and Evaluation*, integrated test and evaluation strategy to assess operational effectiveness and suitability.**
- **Chapter 10, *Decisions, Assessments, and Periodic Reporting*, program manager and Milestone Decision Authority oversight responsibilities.**
- **Chapter 11, *Program Management Activities*, activities and decisions required of the program manager, not discussed in earlier chapters.**

5000 Guidebook Overview

- *Acquisition professionals should use this Guidebook to perform their management responsibilities.*
- *Each chapter is designed to improve understanding of the acquisition process and ensure knowledge of the statutory and regulatory requirements associated with the process.*
- *The Guidebook is more an electronic reference system than a "book".*
- *Hyperlinks let you electronically jump to related info.*
- *Some links take you to external references, such as United States Code, or other formal DoD publications.*

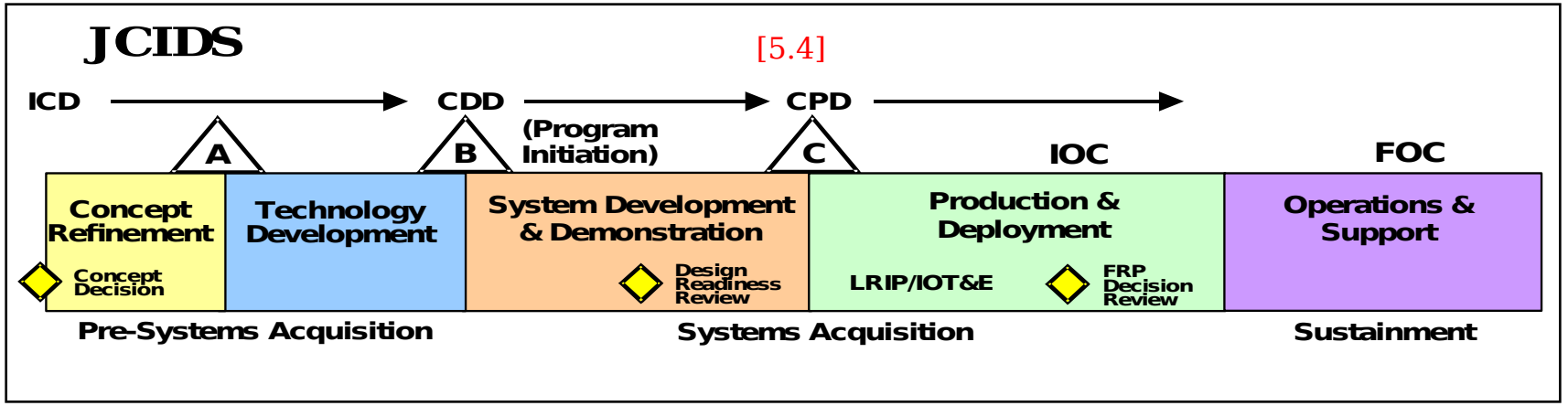
http://AKSS.DAU.MIL/DAG/

Total Life Cycle Systems Management (TLCSM) [5.1.1]

Life Cycle Logistics (LCL) [5.1.2]

LCL in Systems Engineering (SE) [5.2]

Performance Based Logistics (PBL) [5.3]



Under TLCSM the PM is responsible for Life Cycle Logistics (LCL), emphasizing LCL in systems engineering and implementing product support through Performance Based Logistics (PBL)

Discussion Topics

- **How can we accelerate adoption of international standards to support net-centric operations and logistics?**
- **What is the appropriate role for industry and professional societies in standards adoption?**
- **Are current standards efforts sufficient to achieve net-centric operations and life cycle management?**
- **How can we better synchronize standards**

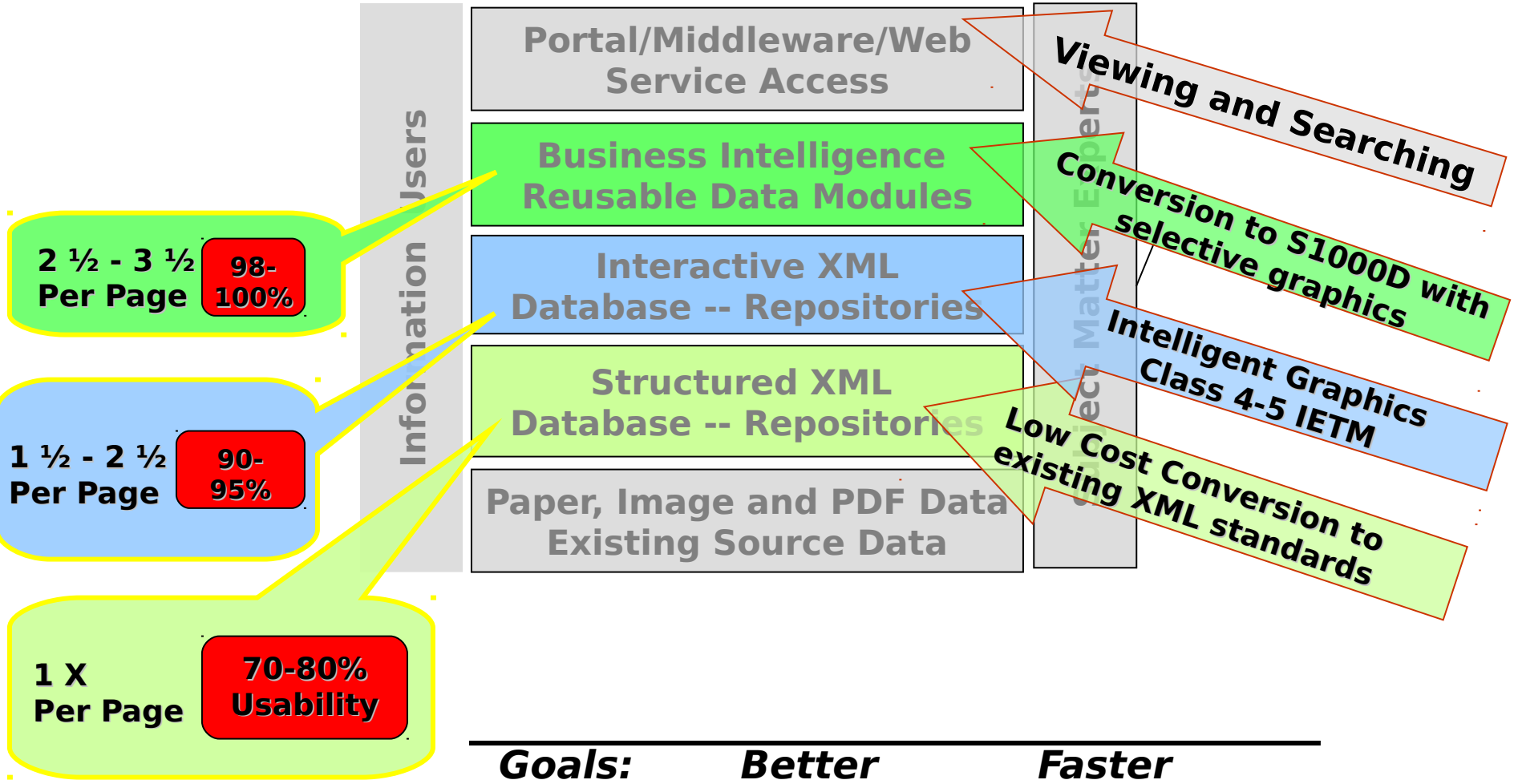
Will application of S1000D help DoD achieve Net Centric Focused logistics? Are there other alternatives?

Summary

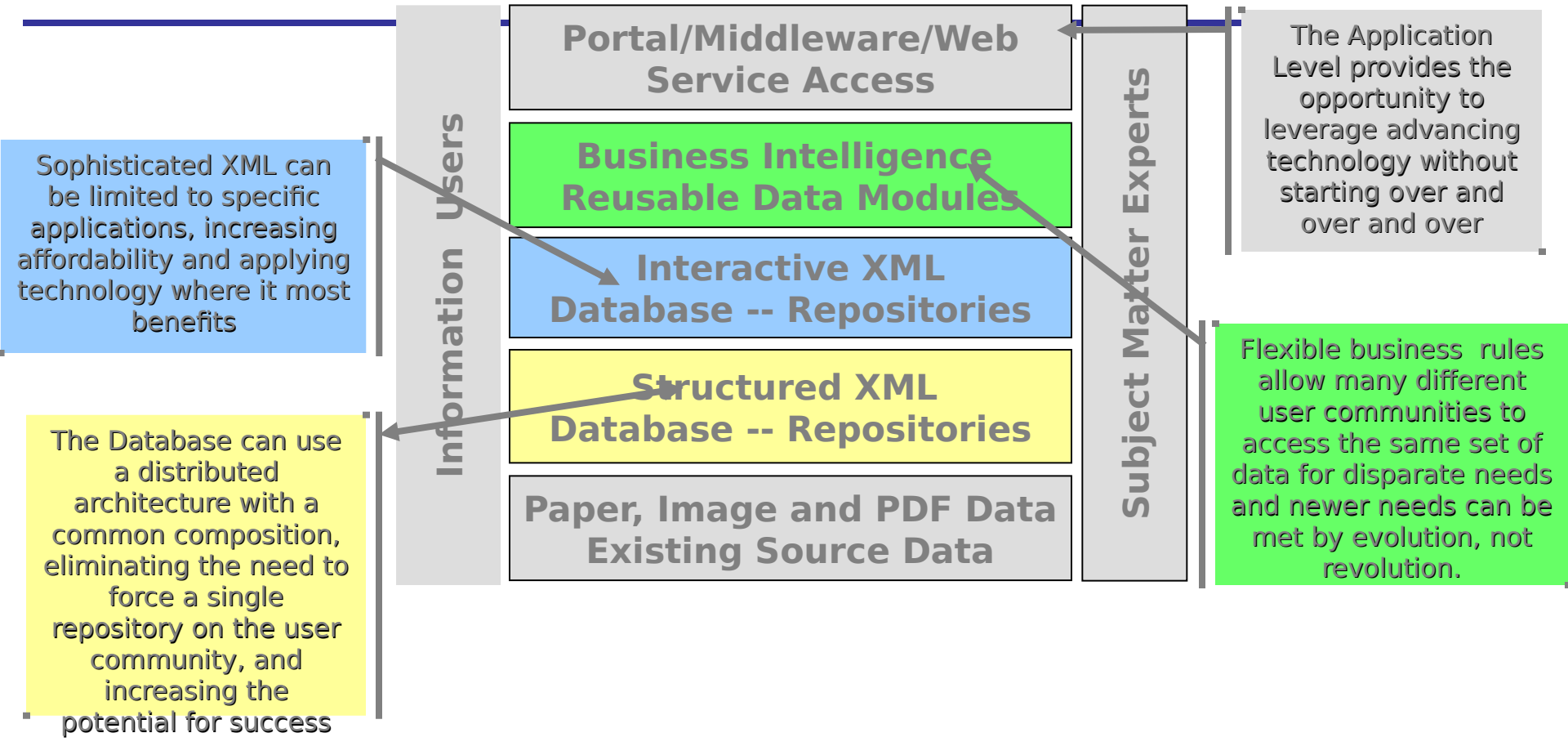
- ***Government and Industry must work together to achieve this objective***
  - ***Framework has been established***
  - ***Performance based products***
  - ***Challenge to implement, must be cost effective***
  - ***Change is hard, but we owe it to the Warfighters to succeed***

Meeting Warfighter needs Around the Clock, Around the Globe.

Potential Tech Data Solution Set


Portal/Middleware/Web Service Access
Business Intelligence Reusable Data Modules
Interactive XML Database -- Repositories
Structured XML Database -- Repositories
Paper, Image and PDF Data Existing Source Data
Viewing and Searching
Conversion to S1000D with selective graphics
Intelligent Graphics Class 4-5 IETM
Low Cost Conversion to existing XML standards
2 ½ - 3 ½ Per Page
98-100%
1 ½ - 2 ½ Per Page
90-95%
1 X Per Page
70-80% Usability
Goals: Better Faster Affordable

Potential Tech Data Solution Set


Portal/Middleware/Web Service Access
Business Intelligence Reusable Data Modules
Interactive XML Database -- Repositories
Structured XML Database -- Repositories
Paper, Image and PDF Data Existing Source Data
Information Users
Subject Matter Experts
Sophisticated XML can be limited to specific applications, increasing affordability and applying technology where it most benefits
The Database can use a distributed architecture with a common composition, eliminating the need to force a single repository on the user community, and increasing the potential for success
The Application Level provides the opportunity to leverage advancing technology without starting over and over and over
Flexible business rules allow many different user communities to access the same set of data for disparate needs and newer needs can be met by evolution, not revolution.

Goals: Better Faster Affordable